

Original Communication

Autopsy profiles of malpractice cases

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Abstract

Claims for medical malpractice and the number of lawsuits filed thereafter are increasing in Turkey as is the case throughout the world. In the present study all files issued by the associated boards of the Council of Forensic Medicine between 2001 and 2005 were studied and of those, 525 death cases in which there was a medical malpractice claim were included. 303 of the cases (57.7%) were male, 215 (41%) were female, while no gender was mentioned in seven cases (1.3%). The age of the subjects ranged between 0 and 90, with an average of 26.8. 147 cases (28%) were related to Emergency Units. 92% of the cases (482 cases) were resolved in the Council of Forensic Medicine, Ministry of Justice. 167 of the resolved cases were concluded as medical malpractice.

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1. Introduction

Claims for medical malpractice and the number of lawsuits filed thereafter are increasing in Turkey as is the case throughout the world.¹ Autopsy is a valuable tool to reveal and prove medical malpractice. When medical malpractice cases in Turkey are subjected to lawsuits, autopsies are performed according to legal autopsy procedures.

The cases included in this study are the ones that are referred to the Council of Forensic Medicine by either criminal or civil courts with the suspicion of a medical malpractice resulting in death. These are not closed claims. The Council of Forensic Medicine is the official expert witness organization linked to the Ministry of Justice, which gives reports upon request of either civil or

criminal courts. It does possess neither a function like an arbitration service nor an alternative resolution service. The judge is required to obtain expert witness service either from the Council of Forensic Medicine (Ministry of Justice), the Supreme Health Council (Ministry of Health), related departments of Universities or other institutions or experts; however, he is not bound by the expert's opinion. The judge weighs the experts' opinions based on their knowledge and experience. In legal practice the reports of the Council of Forensic Medicine are considered as more acceptable.

Expert witness for malpractice cases is one of the duties of the 3rd Specialty Board of the Council of Forensic Medicine. Forensic medicine specialists as well as specialists of other branches like general surgery, pathology, pediatrics, gynecology and obstetrics, or cardiology are represented in this board.

This study aims to reveal the malpractice profile of cases resulted in death.

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2. Materials and methods

All files issued by the associated boards of the Council of Forensic Medicine were investigated and 525 death cases with a medical malpractice claim were included in the study.

Age, gender, duration of hospitalization, monitoring clinical units, clinical diagnosis, autopsy diagnosis, and the specialization claimed for malpractice were investigated.

3. Results

Between 2001 and 2005, 525 death cases were investigated for medical malpractice in the Council of Forensic Medicine. 303 of the cases (57.7%) were male, 215 (41%) were female, while no gender was mentioned in seven cases (1.3%).

Graphic 1 gives the distribution of cases according to years.

The ages of the subjects ranged between 0 and 90, with an average of 26.8. With 15.4% perinatal deaths formed the largest group, followed by cases of 31 to 40 year-of-age (15%) (Table 1).

147 (28%) of the cases had applied to the Emergency Unit and were treated there, 118 (22.5%) cases were treated

in Gynecology and Obstetrics, 64 cases (12.2%) were treated in General Surgery (Table 2).

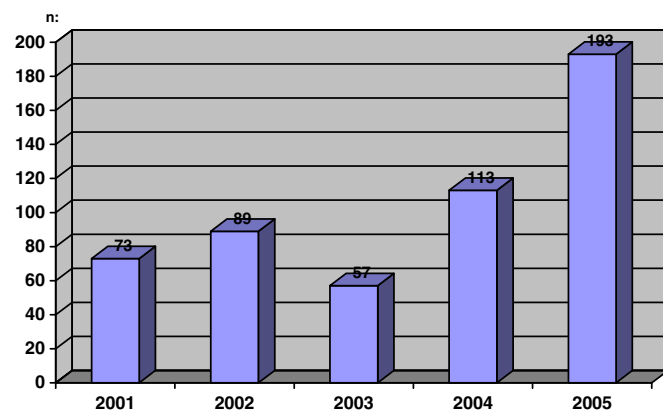
According to the duration of hospitalization, the largest group was treated from 0 to 24 h (51.6%) (Table 3).

Of total 525 cases, 71% (375 cases) were subjected to autopsy. 92% of the cases (482 cases) were resolved in the Council of the Forensic Medicine, Ministry of Justice, while 43 cases (8%) were not due to various reasons.

The 3rd Specialization Board concluded medical malpractice in 167 of the resolved cases, while 315 cases were considered as not related to medical malpractice. Considering the healthcare professionals causing medical malpractice, physicians constituted the largest group with 96.4% (Table 4).

The clinical units with the highest malpractice percentage were Gynecology and Obstetrics (22.2%) and General Surgery (17.4%) (Table 5).

Medical interventions claimed for malpractice are given in Table 6.



Graphic 1. Annual distribution of cases.

Table 1
Age distribution of cases

	Number of cases	%
Perinatal death	81	15.4
8 days to 12 months	38	7.3
1–10	70	13.3
11–20	44	8.4
21–30	61	11.6
31–40	79	15.0
41–50	55	10.5
51–60	45	8.6
61–70	29	5.5
71 or over	23	4.4
Total	525	100

Table 2
The accused clinical units

	Number of cases	%
Emergency unit	147	28.0
Gynecology and obstetrics	118	22.5
General surgery	64	12.2
Pediatrics	44	8.4
Brain surgery	36	6.9
Orthopedics	25	4.8
Intensive care unit	19	3.6
Internal medicine	18	3.4
Cardiovascular surgery	12	2.3
Ear, nose and throat diseases	6	1.1
breast surgery	6	1.1
Urology	5	1.0
Breast diseases	5	1.0
Neurology	4	0.8
Infectious diseases	4	0.8
Cardiology	3	0.6
Pediatric surgery	2	0.4
Psychiatry	2	0.4
Plastic surgery	1	0.2
Unknown	4	0.8
Total	525	100

Table 3
Duration of hospitalization

	Number of cases	%
First 24 h	271	51.6
2–7 days	127	24.2
8–20 days	80	15.2
21 days and over	40	7.6
Unknown	7	1.3
Total	525	100

Table 4
Distribution of personnel against whom a claim was concluded as medical malpractice

	Number of cases	%
Physician	161	96.4
Midwife	12	7.2
Nurse	3	1.8
Hospital management	4	2.4
Pharmacist	2	1.2
Biologist	1	0.6
Total	167	100

Table 5
Clinical units of physicians who are accused of medical malpractice

	Number of cases: 167	%
Gynecologist and obstetrician	37	22.2
General surgeon	29	17.4
Practitioner	28	16.7
Pediatrician	17	10.2
Internist	12	7.2
Brain surgeon	11	6.6
Anesthetist	7	4.2
Cardiovascular surgeon	7	4.2
Orthopedist	4	2.4
Cardiologist	3	1.8
Infection diseases specialist	2	1.2
Ear, nose, and throat specialist	2	1.2
Urologist	2	1.2

Table 6
Cases concluded as medical malpractice

	Number of cases	%
<i>Cases involving only one specialization</i>		
Misdiagnosis	12	7.2
Follow up failure	25	14.9
Refusal to consulting	5	3
Failure to apply a treatment or mistreatment	39	23.4
<i>Cases involving multiple disciplines</i>		
Misdiagnosis and mistreatment	27	16.2
Delay in diagnosis and treatment	19	11.3
Follow up failure and mistreatment	14	8.4
Misdiagnosis and follow up failure	9	5.4
Refusal to diagnosis and consulting	8	4.8
Refusal to treatment and consulting	2	1.2
Diagnosis, treatment and follow up failure	7	4.2
Total	167	100

4. Discussion

Medical malpractice claims are observed in Turkey at an increasing fashion. Continuous developments in medicine, excessive introduction of these developments to the society, increasing awareness, establishment of public juries in some countries, improving insurance systems, and other medical and legal factors are among reasons for the increment of medical malpractice claims. In addition, particularly in Turkey, increasing number of related news in the media strongly contributed to this escalation.

The study covered the years between 2001 and 2005. In 2001 the number of cases was 73 (13.9%), which increased to 193 (36.8%) in 2005 (160% increment). This proves that there is a significant increase in medical malpractice claims in Turkey.

In this study, the largest age group was formed by perinatal death cases (15.4%). This indicates the significance of stillborn cases among medical malpractice claims in Turkey.

Differing from other studies, in this study, cases treated in Emergency Units had the highest rate (28%) (Table 2). This can be explained by the fact that the study covered cases resulted in death, mostly deceased shortly after applying to the Emergency Unit. Considering the duration of hospitalization, 51% was formed by cases treated from 0 to 24 h, which somehow supports the Emergency Unit's ranking first. In a study covering 911 cases that died in the first 24 h, a dispute between the autopsy diagnosis and clinical diagnosis (51.7%) was reported.² In our study, the number of cases applying to the Emergency Unit was 147, 42.8% of these cases revealed a major diagnosis change in autopsy. In 42% of these cases a medical malpractice was concluded. The high rates so determined are due to cases being more risky ones which require urgent intervention. These are patients who require instant initiative, and end mostly fatal. In order to reduce mistakes, a detailed history should be taken from the patients applying to the emergency unit, their examinations should be made properly, consultations should be required where necessary, and they should be maintained under observation for a sufficient period of time. Utmost care should be spent for the communication between medical institutions as well.^{3,4}

In some studies, a significant correlation is reported between prolonged hospitalization and incorrect diagnosis.^{5,6} In the present study, for cases deceasing in the first 24 h, the rate of medical malpractice was 36%, while for the ones living for 21 days and over, this rate was 22% (Table 3). Contrary to literature, the medical malpractice rate was higher in patients with prolonged hospitalization. Deficiencies in diagnosis, failure in attempted interventions, lacking of necessary consultations, or not referring to other medical institutions may explain this discrepancy.

At the evaluation according to the field of activity, medical malpractices mostly involved physicians (96%) (Table 4). However, other medical personnel such as midwives, nurses, pharmacists have a certain influence as well. Because of that, not only physicians but also accompanying midwives, nurses or other medical personnel, as well as pharmacists or people in other disciplines should be sensitive and well informed.

In the present study, midwives were found to have a higher malpractice rate than nurses. This depends on the perinatal death cases covering a more significant place in the study. As for Turkey, according to 2003 data, the perinatal death rate of 0.34% could not be reduced so far, persisting as an important problem.⁷

According to clinical unit classification, gynecology and obstetrics had the first rank, followed by general surgery, pediatrics, and internal medicine. Lynch et al.⁸ classified the high risk clinical units as gynecology and obstetrics, anesthesia, and orthopedics. Dettmeyer et al.⁹ stated that general surgery is most commonly accused (38.5%), followed by gynecology and obstetrics (19.3%). In this study, malpractice rate was higher in surgical units.⁹ National Health Service Litigation Authority (NHSLA) indicated that surgery was the most frequently claimed specialty in England in 2007.¹⁰

In the present study, in 60% of the cases (315 cases) no malpractice decision was made, while in 32% (167 cases), a malpractice was concluded. This shows that the claims for a medical malpractice in about 2/3 of the cases are unfounded. This value is about 45% to 50% in the countries other than Turkey.^{8,11} In Turkey, patient satisfaction seems to be less. In a study carried out in Turkey, the number of unfounded claims in a study was 69.2%.¹ The lawsuits filed based on these unfounded claims may lead to a bad reputation even if physicians are absolved, and may trigger off physicians to act reluctantly and this in turn may lead to failure in taking initiatives. On top of that the legal process may cause for psychological problems in physicians. This may extend so far that the physician quits his/her profession.

Consistent with literature, failure to apply a treatment or mistreatment (23.4%) were found at the highest level, followed by misdiagnosis and mistreatment (16.2%) (Table 6).^{9,12} The latter ones are cases where the treatment would change if they could be diagnosed properly. Interventions commonly encountered as malpractice in literature are diagnosis, surgical treatment, follow up, medical treatment, nutrition, and anesthesia related failures.^{9,13,14}

In this study, the autopsy rate was 71%, which is a quite good rate for Turkey. Generally the autopsy rate in Turkey is low (about 45%) in legal cases, this rate even drops to 2%^{15–18} in traffic accidents. In 30.2% of the cases for which a medical malpractice decision could not be made (13 cases) the reason was stated as failure in doing autopsy and in turn failure to establish the reason for death. Since autopsy often reveals findings which could help physicians to get acquitted, they should not neglect but rather support the autopsy process. Autopsy is important for malpractice cases especially on issues of causation.

In conclusion medical malpractice claims increased in recent years in Turkey. Medical malpractice resulting in stillbirth has an important place among all medical malpractice cases. Emergency Units are the most frequently accused clinical units; however, gynecology and obstetrics is the primary branch claimed for malpractice. Generally physicians are sued for medical malpractice. 32% of the

cases are concluded as medical malpractice. Medical malpractice is most frequently observed in failure to apply a treatment or mismanagement.

Conflict of interest

None declared.

References

1. Buken E, Ornek Buken N, Buken B. Obstetric and gynecologic malpractice in Turkey: incidence, impact, causes and prevention. *J Clin Forensic Med* 2004;**11**(5):233–47.
2. Lundberg GD. Low-tech autopsies in the era of high-tech medicine: continued value for quality assurance and patient safety. *JAMA* 1998;**280**:1273–4.
3. Elmas I, Tuzun B, Asıcıoğlu F, Ince H. Acil tedavi basamağındaki yetersizlikler ve hekim hataları: 5 olgu sunumu. *İstanbul Tıp Fakültesi Mecmuası* 1998;**61**(2):232–6.
4. Gurpınar S, Gunduz M, Ozoran Y. Medikal malpraktis-Tıpta yanlış uygulama (6 olum olgusu nedeni ile). *Adli Tıp Dergisi* 1994;**10**:97–100.
5. Cameron HM, Mc Googan E, Watson H. Necropsy: a yard-stick for clinical diagnosis. *Br Med J* 1980;**281**:985–8.
6. Goldman L, Sayson R, Robbins S, Cohn LH, Bettmann M, Weisberg M. The value of the autopsy in three medical areas. *N Engl J Med* 1983;**308**:1000–5.
7. Erdem G. Perinatal mortality in Turkey. *Paediatr Perinat Epidemiol* 2003;**17**(1):17–21.
8. Lynch C, Coker A, Dua JA. A clinical analysis of 500 medico-legal claims evaluating the causes and assessing of potential benefit of alternative dispute resolution. *Brit J Obstetr Gynecol* 1996;**103**:1236–42.
9. Dettmeyer R, Egl M, Maeda B. Medical malpractice charges in Germany-role of the forensic pathologist in the preliminary criminal proceeding. *J Forensic Sci* 2005;**50**:423–7.
10. The NHS Litigation Authority. Factsheet 3: information on claims. <<http://www.nhs.uk/NR/rdonlyres>> (30.4.2008).
11. Andrews LB, Stocking C, Krizek T, Gottlieb L, Krizek C, Vargish T, et al. An Alternative strategy for studying adverse events in medical care. *Lancet* 1997;**349**:309–13.
12. Wanzel KR, Jamieson CG, Bohnen JMA. Complications on a general surgery service: incidence and reporting. *Can J Surg* 2000;**43**(2):113–7.
13. Brennan TA, Leape LL, Laird N, Hebert L, Localia AR, Lawthers AG. Incidence of adverse events and negligence in hospitalized patients. Results of the Harvard Medical Practice Study I. *N Engl J Med* 1991;**324**(15):370–6.
14. Goldstein RL. Medical malpractice in the absence of a doctor-patient relationship: the potential liability of psychiatric examiners in New York State. *J Forensic Sci* 1989;**34**:1246–9.
15. Akar T, Yavuz Y, Demirel B, Senol E, Egilmez L. Diyarbakır'da 2000–2004 yılları arasında meydana gelen dogal nedenlere bağlı olmayan olumler Türkiye Klinikleri. *J Forensic Med* 2006;**3**:94–100.
16. Demirel B, Akar T, Ozdemir C, Canturk N. Trafik kazası sonucu olumlerde otopsi kararini etkileyen nedenler. *Adli Tıp Bulteni* 2005;**10**(3):77–83.
17. Goren S, Subasi M, Tirasci Y, Kaya Z. Trafik kazalarına bagli olumler. *T Klin Adli Tıp Der* 2005;**2**(1):9–13.
18. Inanici MA, Birgen N, Aksoy E, et al. Medico-legal death investigations and autopsies in Istanbul, Turkey. *J Clin Forensic Med* 1998;**5**:119–23.